Practitioner's Docket No. 76711.00101 *PATENT*

Inventor: Bruce Schoenberger and Edward P. Eberhardt
Title: PRESSURE SENSING METHOD AND APPARATUS
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Examiner: Samuel J. Walk

## SUPPLEMENTAL DECLARATION

As the named inventor on the above-referenced pending United States patent application, I hereby declare that I believe that I invented the subject matter that is presently claimed, in the United States patent application referenced above, and I am the original, first and joint inventor of such subject matter and further that I understand that the claims pending in the United States patent application referenced above are those attached hereto as Attachment 1.

I hereby further declare that the subject matter defined by the attached clams as currently pending in the above-referenced United States patent application was part of my invention and was invented by me before the effective filing date to which the application, as above identified, is entitled for the invention.

I hereby further state that I have again reviewed and affirm that I understand the contents of the application specification, including the claims pending in the application as such claims are attached hereto as Attachment 1.

I again acknowledge the duty to disclose information, which is material to patentability as defined in Title 37 of the Code of Federal Regulations of United States of America, Section 1.56, and which is material to the examination of the patent application as identified above, namely, information where there is a substantial likelihood that a reasonable patent examiner in the United States Patent and Trademark Office would consider that information important in deciding whether to allow the application to issue as a United States patent. I further declare and affirm that I have disclosed all such information through our attorneys to the United States Patent and Trademark Office and have received copies of such submissions as made to the United States Patent and Trademark Office from our attorneys.

I hereby further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the patent application referenced above or of any patent to issue therefrom.

Date: 1-26-07 Bruce Schoenberger
**BRUCE SCHOENBERGER**

**Country of Citizenship** United States
**Residence** Danielville, Pennsylvania
**Post Office and Mailing Address** 1399 Nectarine Road, Danielville, PA 18038

Date: 1-26-07 Edward P Eberhardt
**EDWARD P. EBERHARDT**

**Country of Citizenship** United States
**Residence** Slatington, Pennsylvania
**Post Office and Mailing Address** 4132 Mountain Road, Slatington, PA 18080

## ATTACHMENT A - LISTING OF ALLOWED CLAIMS

114. A multi-wheeled highway vehicle for transporting passengers, cargo or both, comprising:

a. plurality of wheels supporting said vehicle, said wheels having pneumatic tires mounted thereon;

b. a transducer mounted on one of said wheels at a position radially inboard of the tire mounted on the wheel, for sensing pressure in the tire mounted on the wheel and providing an output signal indicative thereof;

c. a comparator connected to said wheel at a position radially inboard of the tire—wheel interface, receiving said output signal, for comparing said output signal from said transducer to a reference and providing an second output signal indicative of said comparison;

d. a transmitter carried by said vehicle, receiving said second output signal produced by said comparator, for sending tire pressure information in said second output signal to a remote locale, optionally together with information identifying said vehicle, and/or the location of said vehicle and/or the speed and/or direction of travel thereof;

e. an aerodynamic wheel cover assembly attached to the inner periphery of said wheel having said transducer connected thereto, said wheel cover assembly comprising:

i. a substantially elliptically-shaped dome sized to be securely attached to the wheel with the rim facing into a concave side of said dome;

ii. an exhaust port positioned at an apex of the dome, having diameter creating low pressure within the wheel cover when the wheel cover is fastened to said wheel and said wheel is rotating;

iii. a bridge over the exhaust port;

iv. a mechanical pressure gauge, an intake valve, a valve stem, a valve assembly and a gauge, at least one of which being disposed on said bridge and remaining ones being proximate said bridge, wherein the valve stem, hose, gauge and valve assembly are in pneumatic communication such that when the hose is in pneumatic communication with a fill-valve of the tire, the gauge displays pressure of the tire and the tire can be inflated and deflated via the valve stem;

v. a wheel clip assembly base portion comprising a strip curved to conform to an inner periphery of the rim;

vi. a wheel clip assembly bracket portion attached to the base portion and having a first and second end;

vii. a spring clip secured to the second end; and

viii. a Dzus fastener positioned about the spring clip and securing the aerodynamic wheel cover against the bracket portion.

115. Apparatus for monitoring tire pressure in a tire of multi-wheeled highway vehicle for transporting passengers, cargo or both, comprising:

a. a transducer mechanically mounted on one wheel of the vehicle at a position radially inboard of the tire mounted on the wheel, for sensing pressure in the tire mounted on the wheel and providing an output signal indicative thereof;

b. a comparator mechanically mounted on the exteriorly facing surface of the wheel radially inboard of the tire mounted thereon, receiving said output signal, for comparing said output signal from said transducer to a reference and providing an second output signal indicative of said comparison;

c. a transmitter carried by and mounted on an exteriorly facing surface of the vehicle wheel and inboard of the tire, receiving said second output signal produced by said comparator, for sending tire pressure information in said second output signal to a remote locale, optionally together with information identifying the vehicle, and/or the location of the vehicle and/or the speed and/or direction of travel thereof;

d. an externally facing aerodynamic wheel cover assembly attached to the radially outboard periphery of the wheel having the transducer

connected thereto, for shielding the transducer, the comparator and the transmitter from windage during vehicle operation, comprising:

ix. a dome sized to be securely attached to a rim of the wheel having the transducer, comparator and transmitter associated therewith, the exteriorly facing surface of the wheel facing a concave side of said dome;

116. Apparatus of claim 115 wherein the dome further includes an exhaust port, having diameter creating low pressure within the wheel cover when the wheel cover is fastened to the wheel and the wheel is rotating, and wherein the apparatus further comprises:

a. a bridge over the exhaust port;

b. a mechanical pressure gauge, an intake valve, a valve stem, a valve assembly and a gauge, at least one of which being disposed on said bridge and remaining ones being proximate said bridge, wherein the valve stem, hose, gauge and valve assembly are in pneumatic communication such that when the hose is in pneumatic communication with a fill-valve of the tire, the gauge displays pressure of the tire and the tire can be inflated and deflated via the valve stem;

c. a wheel clip assembly base portion comprising a strip curved to conform to an inner periphery of the rim;

d. a wheel clip assembly bracket portion attached to the base portion and having a first and second end;

e. a spring clip secured to the second end; and

f. a Dzus fastener positioned about the spring clip and securing the aerodynamic wheel cover against the bracket portion.